In addition, Claim 13 is effectively an independent claim because it is of a different type than the claim to which it refers. Hence, the rule requiring a dependent claim to limit the claim to which it refers does not apply.

Claim Rejections

The Office Action rejected Claims 1-4, 6-10, and 12-13 under 35 U.S.C. § 102(e) as being anticipated by Grover, U.S. 6,421,349 ("Grover"). Claim 11 was rejected under 35 U.S.C. § 102(a) as being unpatentable over by Grover in view of Su et al., U.S. 2002/0163682 ("Su"). Applicants respectfully traverse these rejections.

In Grover, the distributed pre-configuration of spare capacity occurs after working and spare capacity has been allocated in the network. Thus, the network already has a set of working links and spare links. Grover describes two different ways (identified as IP-1 and IP-2) to connect the spare capacity in cycles.

In IP-1, the working capacity and spare capacity configuration is a given. See, for example, Col. 8, line 30, where Grover states "...the network spare capacity is already given, the following formulation optimizes the PC design within the given set of existing spares...," and in general the discussion at Col. 8, line 27 - Col. 9, line 8, where the working links and spare links are taken as fixed. IP-1 finds a connection of spare links that optimizes the configuration of protection cycles.

In IP-2, while the spare capacity is permitted to be determined in the pre-configuration pattern, the working capacity is fixed in the same manner as in IP-1. Hence, in either case, there is no "allocating working paths and spare capacity in the mesh telecommunications network based on the set of candidate cycles," as claimed in Claim 1.

In Grover, a distributed algorithm (DCPC) is also disclosed for finding a set of pre-configured cycles. The Examiner refers to this DCPC algorithm (Col. 11, line 3) as providing

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allocation of working and spare capacity. However, in the DCPC algorithm, discussed in some detail at Col. 10, line 66 and the text thereafter, the working and spare capacity is a given and so there is no "allocating working paths and spare capacity in the mesh telecommunications network based on the set of candidate cycles," as claimed in Claim 1. Rather, in DCPC, a statelet traverses a network from node to node, acquiring, as it goes, information on the network (e.g., Col. 12, lines 35-55), until it reaches the node (originating node) it started from (Col. 13, lines 22-32), whereupon the information gained by the statelet as it traversed the network, and other statelets arriving at the originating node, is used to establish a restoration path or pre-configured cycle (Col. 13, lines 32-42). The DCPC algorithm thus takes a given set of working links and spare links and finds pre-configured cycles within those existing links. The design is heuristic and is not optimum (Col. 11, lines 4-9).

In the present invention as claimed in Claim 1, the candidate cycles are found first (pre-selecting a set of candidate cycles for forming into pre-configured cycles) and then working capacity and spare capacity is allocated based on those candidate cycles (allocating working paths and spare capacity in the mesh telecommunications network based on the set of candidate cycles). Various methods may be used to select the candidate cycles. In Grover, there is neither pre-selection of candidate cycles, nor allocation of working capacity and spare capacity to those cycles, nor does Grover teach or suggest such an approach.

Claim 1 is therefore patentable over Grover. Claims 2-13 are patentable over Grover for their dependency on allowable Claim 1, and for the additional subject matter they recite. Applicants have considered the disclosure of Su and finds that it does not overcome the deficiencies of Grover discussed above.

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CONCLUSION

Allowance of Claims 1-13 is requested. Should any issues arise that can be resolved by telephone, the Examiner is invited to contact the undersigned counsel at the telephone number indicated below.

Respectfully submitted,

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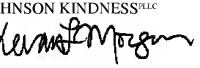

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